

FIG.1

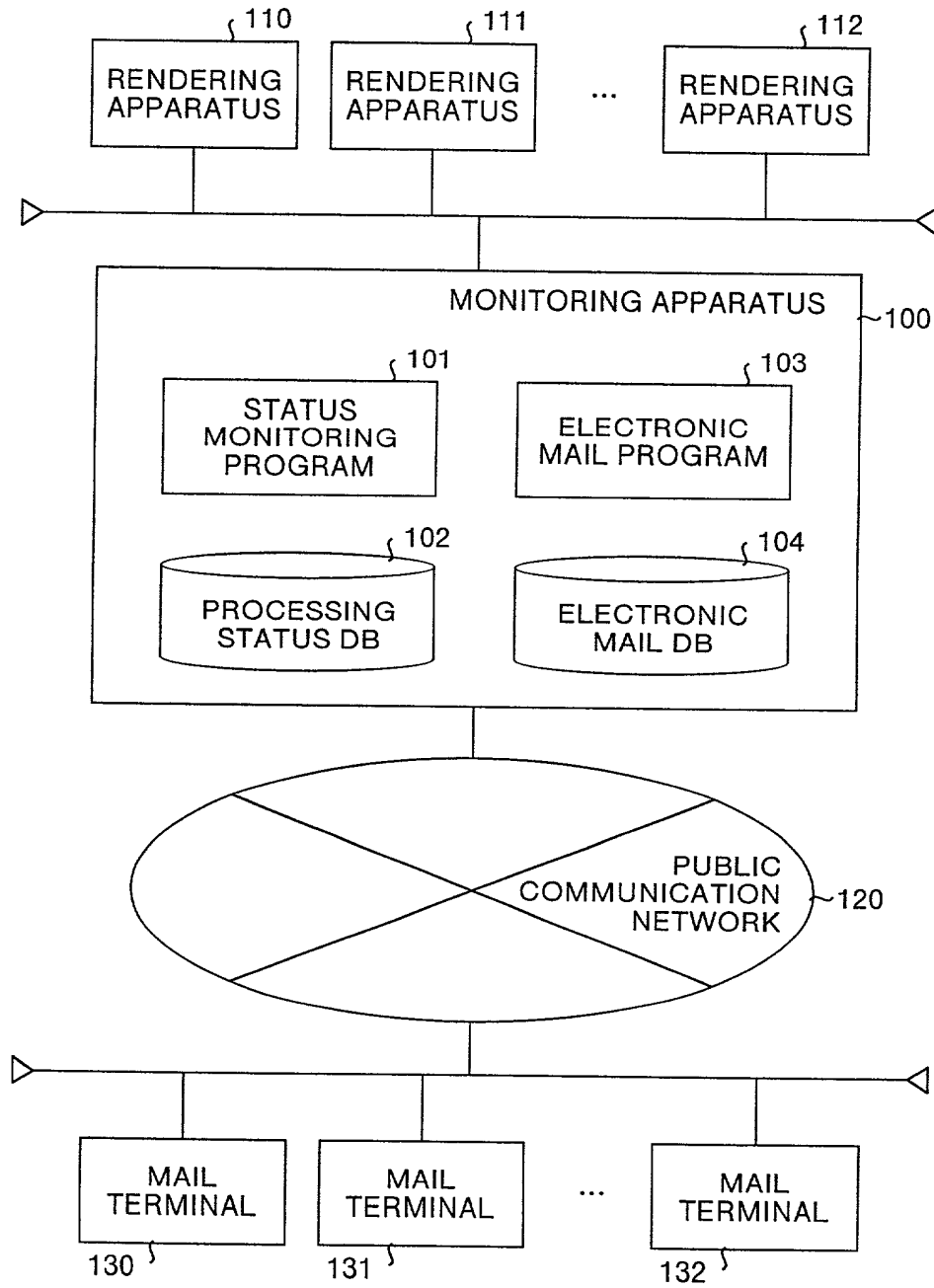


FIG.2

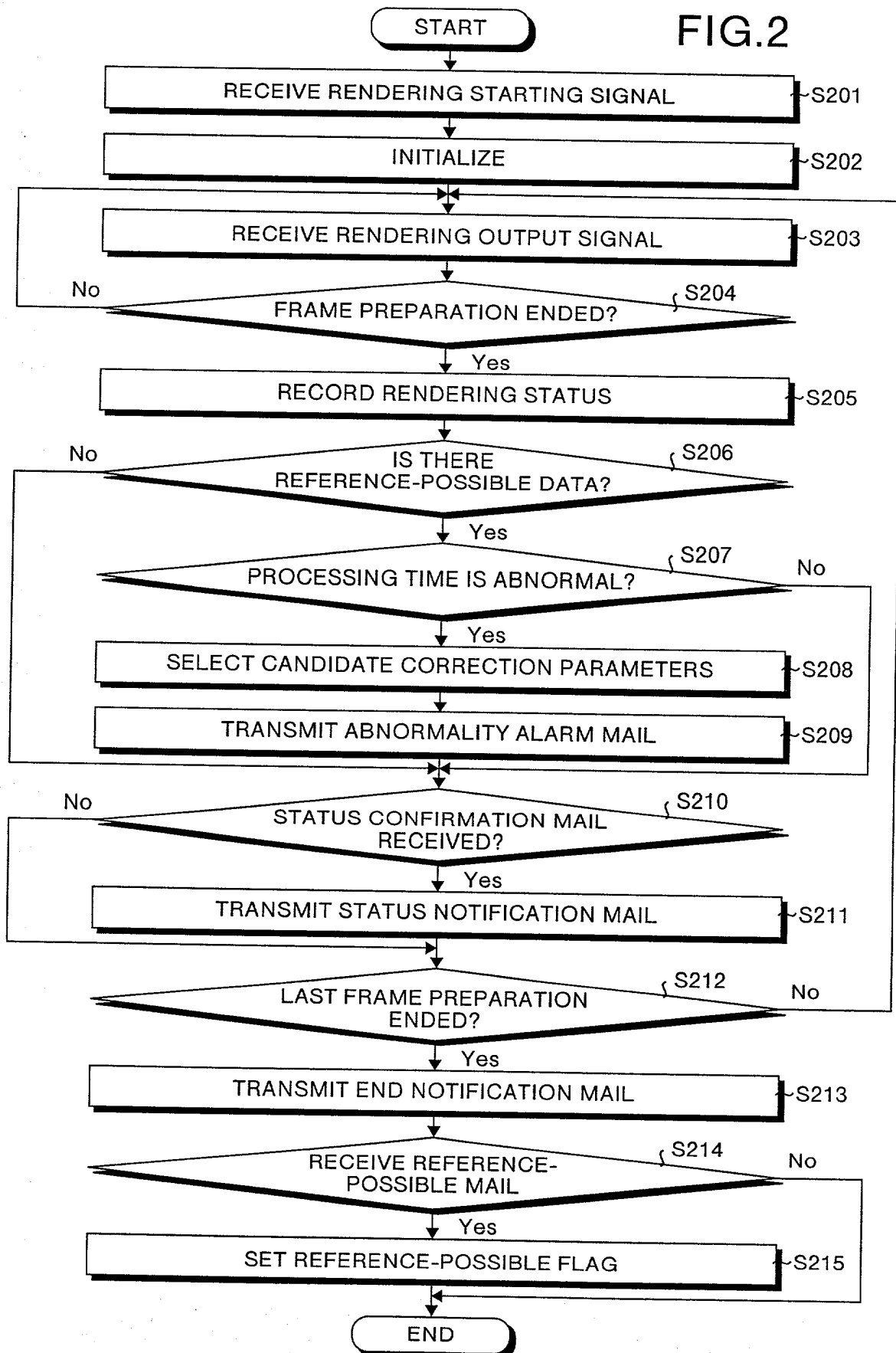


FIG.3

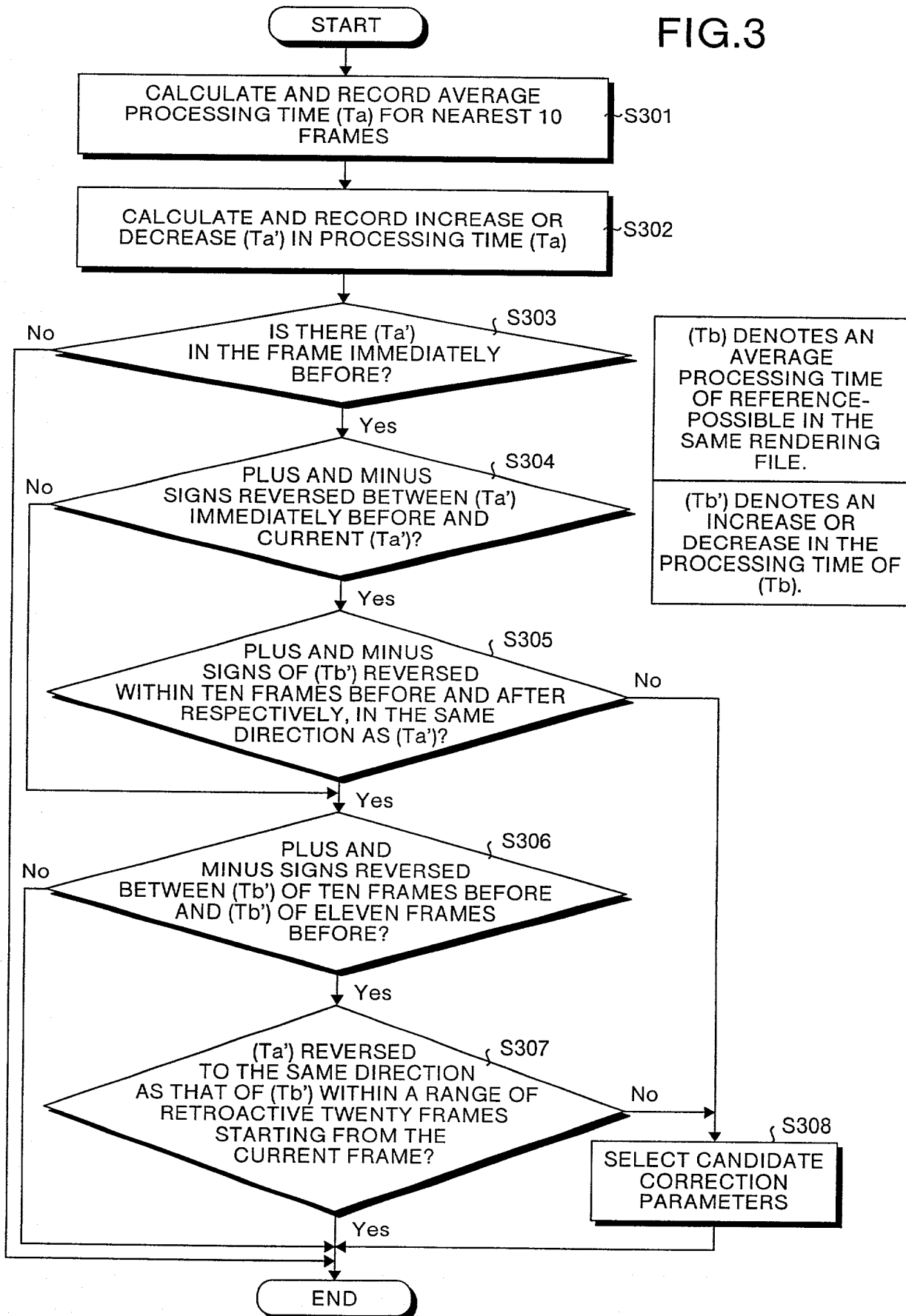


FIG.4

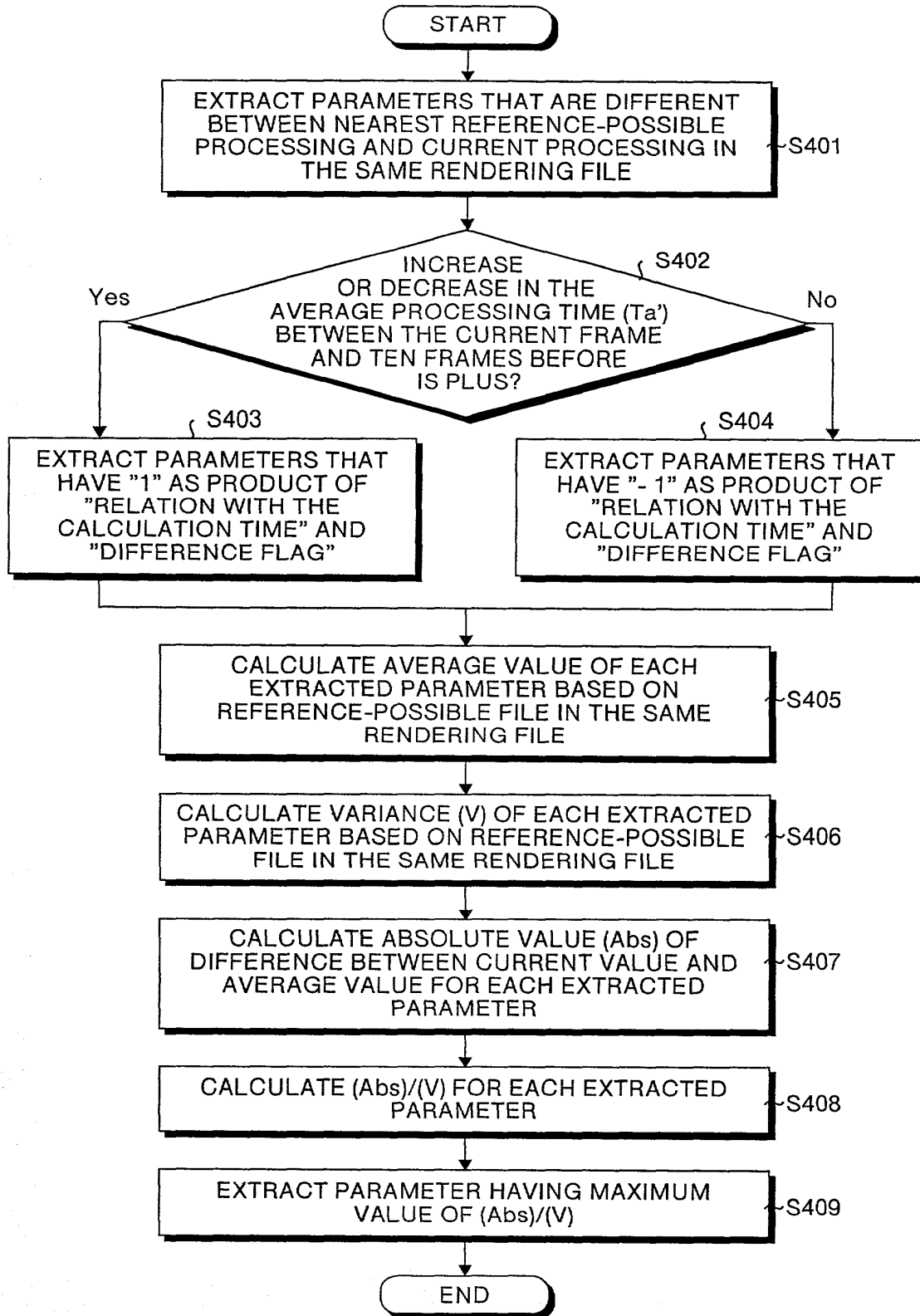


FIG.5

```

> Rendering ID: 013
> User and Host: watanabe on Host-A
> Start time: 2001.06.20 21:36
> Renderer: NormalRender
> Project: ProjectA
> RenderData: /usr/wata/data/rnd02
> Resolution: 720 x 486
> AntiAliasLevel: 3
> SubDivisionLevel: 2
> MotionBlurLevel: 2
> BackFaceCull: 0
> ShadowLevel: 3
> Refraction: 2
> Refraction: 2
> Frames: 1 to 3600 by 2
> Output file: /usr/wata/img/rnd02
Now rendering --> 123 / 1800
Latest memory --> 98,320 (kb)
Total time --> 02d08h13m28s
Average time --> 00h24m13s
Latest time --> 00h19m28s
Rest time --> 03d19h51m

```

~500

FIG.6

```

To: rndobsrv@mail.fujitsu.com
Sub: CHK RND STAT
-----
USR: watanabe
PSWD: 0529
RENDERING ID: 013
RTNID: 09012345678@phone.ne.jp
FILE: attach

```

~600

FIG.7

To: 09012345678@phone.ne.jp  
 Sub: Render status of watanabe

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> Rendering ID: 013  
 > User and Host: watanabe on Host-A  
 > Start time: 2001.06.20 21:36  
 > Renderer: NormalRender  
 > Project: ProjectA  
 > RenderData: /usr/wata/data/rnd02  
 > Resolution: 800 x 600  
 > AntiAliasLevel: 3  
 > SubDivisionLevel: 1  
 > MotionBlurLevel: 3  
 > BackFaceCull: 0  
 > ShadowLevel: 1  
 > Refraction: 3  
 > Refraction: 2  
 > Frames: 1 to 3600 by 2  
 > Output file: /usr/wata/img/rnd02  
 Now rendering --> 123 / 1800  
 Latest memory --> 98,320 (kb)  
 Total time --> 02d08h13m28s  
 Average time --> 00h24m13s  
 Latest time --> 00h19m28s  
 Rest time --> 03d19h51m

File --> attached

700

FIG.8

To: 09087654321@phone.ne.jp  
 Sub: Rendering Time Alarm

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This is an alert mail for your rendering.

Your rendering ID [013] on [Host-A] deviate from expected rendering time curve on frame [122].

You changed following parameters after the last rendering.

-ResolutionX [640] → [800]  
 -ResolutionY [480] → [600]  
 -AntiAliasLevel [2] → [3]  
 -SubDivisionLevel [2] → [1]  
 -MotionBlurLevel [1] → [3]  
 -BackFaceCull [1] → [0]  
 -ShadowLevel [2] → [1]  
 -Refraction [2] → [3]

Most probable parameter you need to change might be [MotionBlurLevel].

And, you better check  
 [Refraction],  
 [AntiAliasLevel],  
 [ResolutionX],  
 [ResolutionY],  
 [BackFaceCull].

800

FIG.9

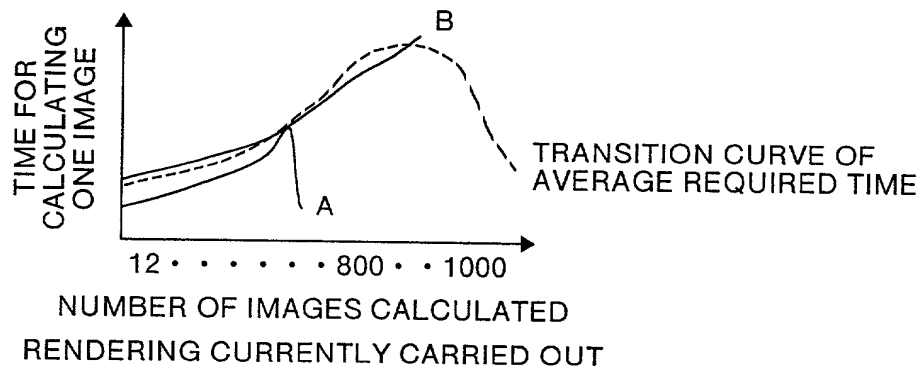
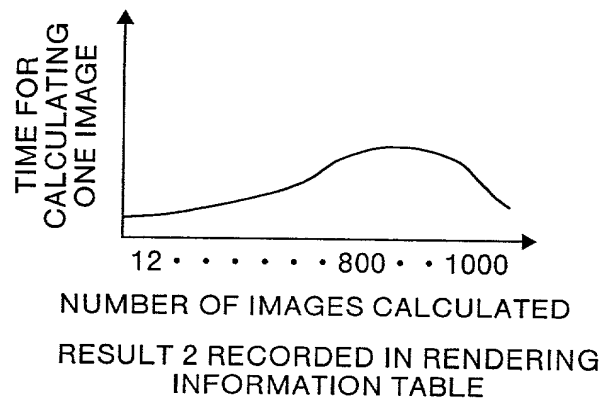
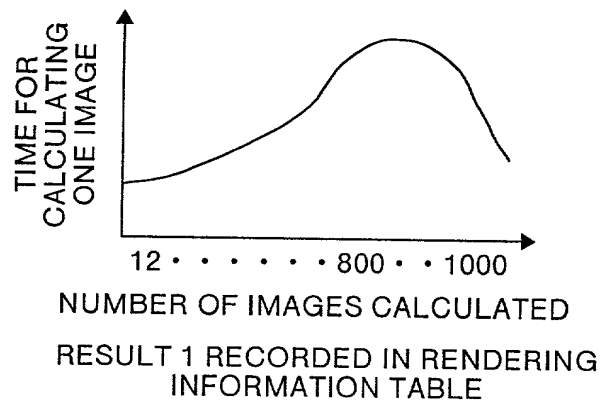
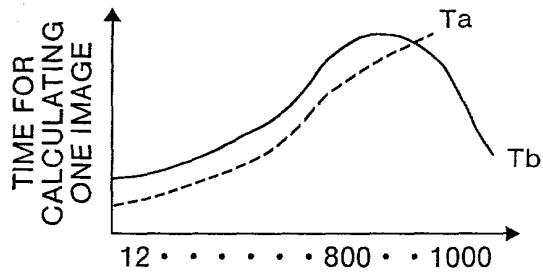


FIG.10

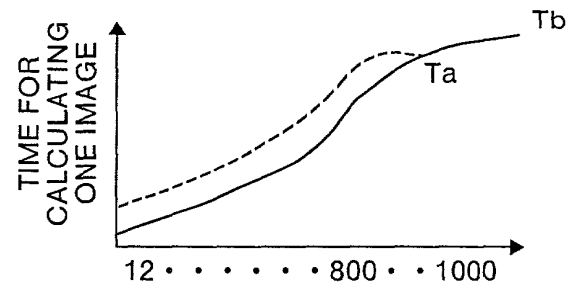
(CASE1)



NUMBER OF IMAGES CALCULATED

Ta'	+	+	-	-	+	+	+	+	
Tb'	+	+	-	-	+	+	-	-	-

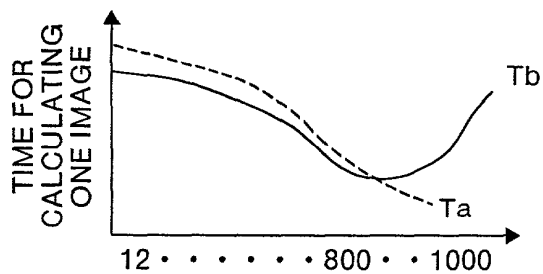
(CASE2)



NUMBER OF IMAGES CALCULATED

Ta'	+	+	+	+	+	+	-		
Tb'	+	+	+	+	+	+	+	+	+

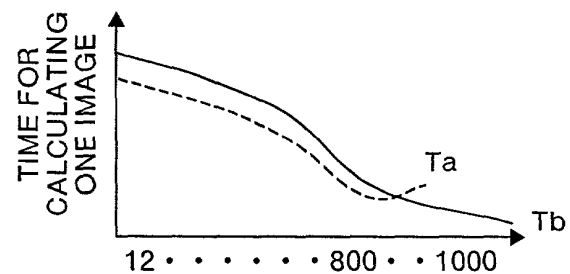
(CASE3)



NUMBER OF IMAGES CALCULATED

Ta'	-	-	-	-	-	-		
Tb'	-	-	-	-	-	-	+	+

(CASE4)



NUMBER OF IMAGES CALCULATED

[illegible]



FIG. 11

1101 RENDERING IDENTIFIER	1102 USER	1103 RENDERING FILE	1104 RENDERING INFORMATION RECORD FILE	1105 RENDERING IMAGE FILE	1106 REFERENCE FLAG
001	Watanabe	/usr/wata/data/rnd01	/global/rnd_check/ wata01052900	/usr/wata/img/ rnd01	0
002	Watanabe	/usr/wata/data/rnd02	/global/rnd_check/ wata01052901	/usr/wata/img/ rnd02	1
004	Aoki	/usr/aoki/data/test01	/global/rnd_check/ aoki01052900	/usr/aoki/img/ test01	0
008	Watanabe	/usr/wata/data/rnd02	/global/rnd_check/ wata01060300	/usr/wata/img/ rnd02	1
009	Tanaka	/usr/tnk/data/tnk001	/global/rnd_check/ tanaka01060300	/usr/tnk/img/ tnk001	1
010	Satoh	/usr/sato/data/rend_tst	/global/rnd_check/ sato01060500	/usr/sato/img/ rend_tst	0
012	Tanaka	/usr/tnk/data/tnk001	/global/rnd_check/ tanaka01062000	/usr/tnk/img/ tnk001b	1
013	Watanabe	/usr/wata/data/rnd02	/global/rnd_check/ wata01062000	/usr/wata/img/ rnd02	1
014	Watanabe	/usr/wata/data/rnd03	/global/rnd_check/ wata01062001	/usr/wata/img/ rnd03	1

FIG.12

FRAME NUMBER	RENDERING TIME
1	0h12m23s
2	0h12m48s
3	0h13m02s
4	0h13m26s
5	0h13m54s
:	:
238	0h08m12s
239	0h08m15s
240	0h08m03s

1301	1302	1303	1304	1305	1300
FRAME NUMBER	AVERAGE TIME T <sub>b</sub>	INCREASE OR DECREASE IN PROCESSING TIME T <sub>b</sub>	AVERAGE OF NEAREST TEN FRAMES T <sub>a</sub>	INCREASE OR DECREASE IN PROCESSING TIME T <sub>a</sub>	
1	0h08m02s	**	**	**	
2	0h08m09s	+7	**	**	
3	0h08m42s	+33	**	**	
4	0h09m13s	+31	**	**	
5	0h09m39s	+26	**	**	
:	:	:	:	:	
119	0h14m02s	+17	0h13m00s	+12	
120	0h14m14s	+12	0h13m15s	+15	
121	0h14m36s	+22	0h13m22s	+7	
122	0h15m00s	+24	0h10m53s	-149	
123	0h15m06s	+6	CALCULATING		
206	0h15m11s	+5			
207	0h15m03s	-8			
208	0h14m58s	-5			
209	0h14m50s	-8			
210	0h14m22s	-28			
:	:	:	:	:	
238	0h06m46s	-16			
239	0h06m32s	-14			
240	0h06m11s	-21			

FIG.14

PARAMETER	RELATION WITH CALCULATION TIME
Resolution X	1
Resolution Y	1
AntiAliasLevel	1
SubDivisionLevel	1
MotionBlurLevel	1
BackFaceCull	-1
ShadowLevel	1
Refraction	1
Refraction	1

FIG.15

1501	1502	1503	1504	1505	1506	1507	1508	1509
PARAMETER	CURRENT VALUE	NEAREST VALUE	DIFFERENCE	"RELATION WITH CALCULATION TIME" X "DIFFERENCE FLAG"	AVERAGE	VARIANCE	ABSOLUTE VALUE OF (CURRENT VALUE - AVERAGE)	ABSOLUTE VALUE/ VARIANCE
ResolutionX	800	640	1	1	544.0	576.0	256.0	0.444
ResolutionY	600	480	1	1	408.0	432.0	192.0	0.444
AntiAliasLevel	3	2	1	1	1.6	2.4	1.4	0.583
SubDivisionLevel	1	2	-1	-1	2.0	2.0	1.0	0.500
MotionBlurLevel	3	1	1	1	0.2	1.6	2.8	1.750
BackFaceCull	0	1	-1	1	0.4	2.4	0.4	0.167
ShadowLevel	1	2	-1	-1	1.6	2.4	0.6	0.250
Refraction	3	2	1	1	1.2	1.6	1.8	1.125
Refraction	2	2	0	0	1.2	1.6	0.8	0.500

1500